

# 4

## INITIATION

The project Initiation phase includes those activities and actions that occur prior to CD-0, Approve Mission Need. In terms of specific project activities, Initiation includes early planning, mission need identification, IPT organization, draft acquisition strategy, pre-acquisition design, PED funds request, etc.

Projects mature through a planned sequence of activities that begin with the identification of a mission need, evaluation of alternatives and possible solutions, and definition of a concept or identified need. They are then implemented through a process that produces the desired product or service. Portions of a project's sequence are timed to produce results that are consistent with budgetary requirements.

While projects have certain similarities as they progress from one project phase to the next, each project will also possess some unique attributes. Care is to be exercised to initiate controls and oversight commensurate with the complexity and cost of the proposed work. Management controls and oversight are necessary during every project phase, but these controls may be tailored to meet project requirements to ensure that the process effectively delivers the new materiel assets.

Initially, Sections 4.1 through 4.5 provide essential discussion on the project phases. Highlights are provided concerning inputs, activities, and deliverables as well as coverage on the Planning, Programming, Budgeting System (PPBS) and PED budget request processes. Sections 4.6 through 4.9 identify the specific processes and deliverables for project initiation.

### **4.1 Project Phases and Models Overview**

The following project phases and models overview is provided to assist the IPT. However, projects by their very nature are unique undertakings and will generally have differences. These differences and interdependencies are to be understood and accounted for by the IPT. Project phases and sub-phases assist in understanding the timeline (i.e., phases/life cycle) of various projects. This helps in the integration of a given project timeline with the various processes and decision points required to successfully accomplish a project. To assist users of this Manual, simplified (one-line) time-phased models have been developed for each of the major project types, with additional detail for the most common project model (System Project) expanded to reflect the more realistic level of complexity. Figure 4-1 provides this more realistic, yet still somewhat simplified integration of the various sub-phases and allows a comparison with the other one-line models.

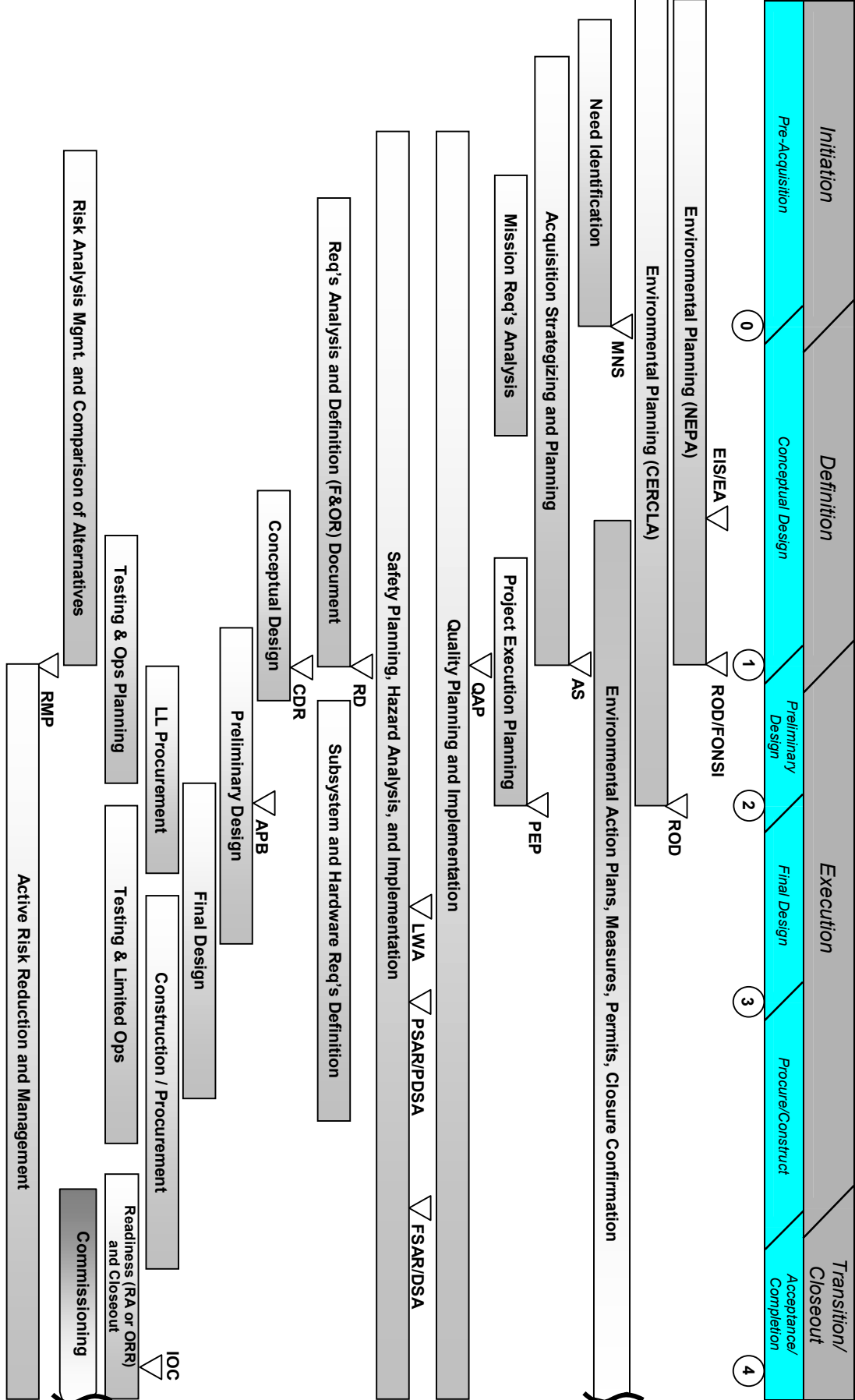


Figure 4-1. Project Processes Overview

#### *4.1.1 Initiation, Definition, Execution, and Transition/Closeout*

Chapters 4, 5, 6, and 7 provide discussions of the integrated activities, outputs, and deliverables that are required during each project phase. The following defines and highlights each of these phases by project type.

##### ***4.1.1.1 Initiation***

The Initiation phase of all projects is that period when ongoing programs are assessing, characterizing, and determining that a mission need can only be met by the acquisition of a new materiel asset. It is complete when the MNS and risk comparison and assessment have been approved and issued as part of the CD-0 package. This phase is the period of time between when the problem/need is determined and CD-0 is approved. Activities include pre-acquisition /mission need determination, and drafting of the acquisition strategy.

##### ***4.1.1.2 Definition***

The Definition phase of all projects is that period immediately following approval of the MNS when the Program, in conjunction with a developing IPT, is defining, evaluating, and comparing attributes (requirements, technology, cost, schedule, safety, quality, risks) of various alternatives. This is accomplished utilizing Systems Engineering (SE) and other techniques and tools, such as Alternatives Analysis and Value Management (VM), to ensure the concept of choice provides the essential functions at the lowest life cycle cost, consistent with required performance, schedule, and cost. This concept of choice, when sufficiently defined and analyzed, is to be submitted to the AE for review and approval as part of the CD-1 package. This phase is the period of time between CD-0 and CD-1. Activities include completion of requirements definition, conceptual design (or equivalent), and completion of the AS.

##### ***4.1.1.3 Execution***

The Execution phase of all projects is that period when sufficient design or scope definition is identified such that the project may be baselined. This baseline, called the APB, may also be a commitment to Congress, and when established, allows the project to move forward into substantial physical implementation—construction, procurement, remediation, decontamination, or software coding. During this phase, CD-2 and CD-3 are accomplished and approved. This is the period of time after CD-1 but prior to CD-4. Events include approval of CD-2 and CD-3, completion of preliminary design, final design, and procure/construct (or equivalent).

##### ***4.1.1.4 Transition/Closeout***

Transition/Closeout of all projects is that period when the project is approaching completion and has progressed into formal transition, which generally includes final testing, inspection, and documentation as the project is prepared for operation, long-term

care or closeout. Once the formal closeout actions are completed and approved, the project transition is complete and CD-4 is approved.

This period of time preceding CD-4 includes completion of a Readiness Assessment (RA) or ORR, IOC, lessons learned, records transfer, final cost report, and demobilization.

#### **4.2 Example Project Life Cycles and Project Phases**

Appendix C highlights the simplified models associated with the four project types and tabulate typical samples, inputs and deliverables, decisions, and document links for project management and IPT use. The following discussion is provided to guide and assist program and project organizations to quickly see and understand a broad timeline by project type including how the phases, critical decisions, major input/milestones, and deliverables link. The examples reflect considerable past experience and have been updated consistent with the ongoing evolution of both DOE and Federal acquisition management guidelines.

##### **4.2.1 System Projects**

As projects are most often unique the development of a universal timeline description that fits all projects is difficult. There are, however, common attributes. The most common of these is the System Project that was discussed in Section 4.1. These projects can range from construction of a fairly simple facility, major equipment procurement and installation (Major Items of Equipment [MIE]) and in many cases design-building of complex integrated systems requiring design, procurement, testing, and construction, all occurring with some overlap or concurrency. Additionally, in real life, overlaps and gray areas between phases are expected and are the norm.

System Projects follow these steps or stages:

- **Pre-Acquisition Activities:** mission need is identified, developed, and justified along with program objectives, end-state requirements, and drafting of the acquisition strategy. Program/project sponsors are identified along with preliminary NEPA strategies and processes. The project type is identified; risks identified; outline requirements defined; alternatives analyses and trade-off studies identified and initiated; required research, development, and testing identified and initiated; a PM identified; an IPT organized; and CD-0 requested and approved.
- **Conceptual Design:** AS is completed, risk-assessed, and issued; contracts for conceptual design awarded; conceptual design completed and a CDR prepared; functional & operational requirements (F&OR) defined; a preliminary PEP prepared; preliminary baseline ranges (technical scope, schedule and cost) established; a Preliminary Hazards Analysis prepared; Environmental, Safety, Health & Quality requirements identified and defined; a RMP prepared including its risk analysis; and CD-1 requested and approved.
- **Preliminary/Final Design:** design efforts continue with construction and procurement documents completed; long-lead procurements identified, funds obtained, and contracts awarded; baseline ranges approved; alternative studies, and development and testing

activities completed; a Preliminary Safety Analysis prepared; and CD-2 and CD-3 requested and approved.

- Procurement/Construction: contracts for procurements and construction awarded; permits obtained; turnover and startup plans developed, approved and issued; Final Safety Analysis Report issued; operating and maintenance manuals prepared; and, procurement and construction completed.
- Acceptance/Completion: construction completed, tested, approved and accepted; performance criteria met; IOC verified; RA or ORR completed; drawings and specifications as-built; operations and maintenance training completed; CD-4 requested and approved; and, transition to and acceptance by the user completed.

#### ***4.2.1.1 Simplified Design-Build Projects***

Some projects, due to their scope and makeup, may lend themselves to being expedited through the project management process. Projects that lend themselves to this approach have few if any unknowns, have no new technology requirements, may not require system integration, or include complex long-lead procurements, and not be substantially unique or one-of-a-kind. Generally, projects like road building, administrative facilities, fire stations, etc., may be considered as simplified design-build projects. These kinds of projects may lend themselves to being packaged as design-build projects, where much of the preliminary and final design is completed by a contractor or contractor team who will also build the facility. This may be accomplished by taking the conceptual design effort to a more mature functional design package, but not all the way to a final design. This more mature package, along with the other required procurement items, then provides a bases for a bid package that allows the Government to secure lump sum competitive bids which tie the final design details to the construction, thereby eliminating the potential conflict and changes between two separate identities. However, this is offset by the need for the Government to firmly define its needs, requirements, and scope to prevent cost and schedule growth due to changing requirements after contract placement, which are more difficult and costly under firm, fixed price than cost plus contracts. To properly execute a project like this may require that CD-1 and CD-2 be combined, and CD-3 be eliminated. In all cases, this approach and its bases should be documented and approved as part of the CD-1 or CD-1 and CD-2 package and risk-assessed in the AS prior to bidding. Since project baselining will best be done as part of the bid and placement process, an early Preliminary Project Data Sheet (PPDS) will have to be submitted prior to this and should be worked with and into the DOE budgeting process. Normally projects of this type would not utilize PED funds, and decisions associated with activities like Independent Project Reviews (IPRs), External Independent Reviews (EIRs), and Independent Cost Reviews (ICRs) should be made as part of the initial planning and approved as early as possible—always prior to

bidding. It is imperative that the Government fully establish scope and requirements so they are clear and included in the bidding documents.

#### **4.2.2 *Environmental Management Projects***

EM projects do not necessarily have the same acquisition phases as System Projects, however, they can still effectively utilize CDs. Projects and acquisition phases are determined through a site evaluation that reviews (for the entire site): historical records, production reports, audit reports, interviews with operations personnel, and so forth, with the intent of identifying all areas that might be contaminated by past activities. These areas may be grouped together to form operable or waste units based on geographic location, type and amount of contamination, regulatory drivers, or some other criteria that is agreeable to the responsible organization. Remediation of operable or waste units is accomplished through establishment and execution of projects. Therefore, EM has identified its work into the following categories:

- EM System Projects
- Environmental Restoration (ER) Projects
- Disposition Projects (transition, deactivation, and decommissioning).

A simplified acquisition process for EM projects is described in the following sections.

##### **4.2.2.1 *Environmental Management System Projects***

EM work that is categorized as a System Project will be projectized and managed as a project, consistent with Section 4.2.1. The acquisition process is the same as the System Project model, except there are often more regulatory drivers that initiate the project activity.

##### **4.2.2.2 *Environmental Restoration Projects***

Restoration projects are executed in accordance with applicable Federal and state regulatory requirements including RCRA; CERCLA; and, tri-party agreements (e.g., Federal Facility Agreement). The phases of ER activities and their relation to critical decisions (CDs) are presented in Appendix C. ER projects for a specific waste site often contain multiple sub-units with various remedies (e.g., source removal and groundwater treatment) that may result in multiple CDs for each phase. Multiple sub-units will be documented in an appropriately tailored PEP.

##### **4.2.2.3 *Disposition Projects***

Disposition projects address the decommissioning of surplus contaminated facilities. Decommissioning activities involve the decontamination and safe disposition of facilities that have been deactivated. Safe disposition may include:

- Reuse of a decontaminated building.
- Demolition of a facility with rubble removed from the site.

- Entombment which might involve collapsing a structure and capping the contaminated rubble in place.

Disposition projects follow a decision-making process similar to that of ER projects—characterization, followed by detailed analysis of alternatives, and formal remedy selection. However, there are differences to be considered, as shown in Appendix C.

#### *4.2.3 Information Technology Projects*

Although IT projects may have some uniquely different requirements and deliverables, the processes and approach to CDs and associated deliverables can be adapted from information provided in following sections. The phases of IT activities and their relation to critical decisions (CDs) are presented in Appendix C.

Similar to more traditional DOE projects, IT projects may propose partial CD approval as needed for specific activities (e.g., long-lead Commercial Off-The-Shelf [COTS] purchases). IT projects are to comply with OMB Circular A-130 and utilize the DOE “Guide to IT Capital Planning and Investment.”

#### **4.3 Projects and Typical Outputs/Documents Deliverables**

A significant number of required outputs and documents are developed and issued during the life cycle of a project. Appendix C depicts a large sampling of the possible inputs/activities and deliverables generally needed to support proceeding to the next phase. Many of the identified documents are not only integral to project development, but are necessary for the project to proceed from one phase to the next. Additionally, in this overview the maturity level and associated safety/hazard analysis outputs are also identified.

#### **4.4 Planning, Programming, Budgeting System**

The PPBS is the process that is used to determine which Programs, and more specifically, which requirements receive funding and at what amount. The PPBS process is cyclic and contains three interrelated, overlapping elements: planning, programming, and budgeting. The goal of the PPBS is to obtain and provide the best mix of needed resources to meet DOE’s objectives within fiscal constraints. Program management and budget execution are integrated with other PPBS activities to provide a consistent basis for resource management from planning through execution.

To support the PPBS, the Secretary has established business management processes and systems that are standardized (where feasible), and, where appropriate, flexible (tailored) to its diverse programs. The PPBS process is institutionalized throughout Headquarters and the Field, and uniform guidance that clearly outlines the requirements for the PPBS process is issued at least yearly by each program lead. The Department tracks and manages its Programs and projects from requirements initiation through closeout and turnover to assure compliance with the PPBS.

The PPBS is implemented within the overarching framework of the Department’s Strategic Management System. The goals of the System are to align strategic and operational

planning with strategic intent, ensure that planning drives resource allocation, provide for regular evaluation of results, and generate feedback. The PPBS provides additional structure and implementation details to the Department's strategic management system to accomplish the PAS's objectives, and to focus on needed improvements.

The PPBS process is described in the DOE budget formulation process and is carried out by DOE OMBE. A summary of the overall DOE budget process as it applies to projects is presented in Figure 4-3.

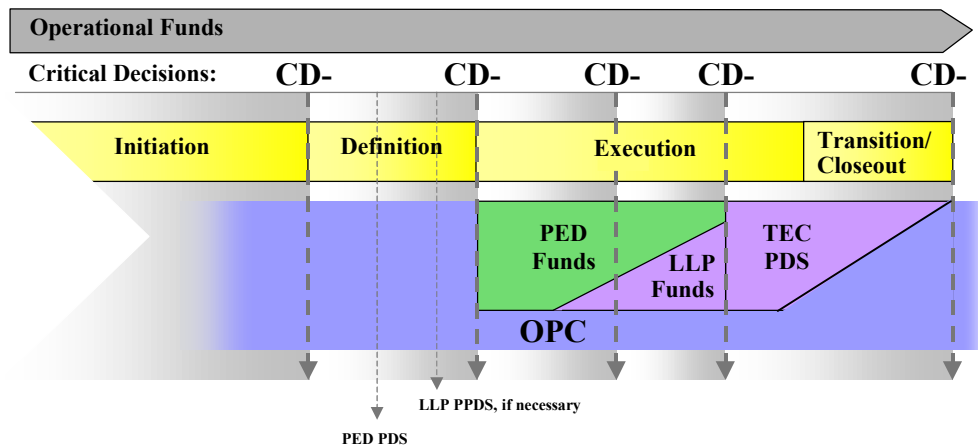
#### **4.5 Project Engineering and Design Funds**

Based on the Project Data Sheet (PDS), PED funds are requested annually as capital "design only" funds for preliminary and final design. PED funds are not to be used for construction, long-lead procurement, or major equipment items. If early funding is required for these items, a Preliminary Project Data Sheet (PPDS) should be submitted prior to CD-2, with justification for these funds. PED funding requests are developed from historical data or parametric estimates. The objectives for the use of PED funds are to:

- Improve the probability of developing an accurate project APB.
- Establish the APB after preliminary design is completed.
- Improve the DOE's planning, programming & budgeting process for the acquisition of projects.
- Provide funds for VM activities (see OMB A-11, Section 5.3.4, and FAR).

The acquisition strategy, acquisition planning, and Critical Decision processes play important roles in the PED process.

CD-0 determines if the materiel asset is required and the date by which it will be provided. That requirement date, together with the project's risk assessment, projected construction uncertainties, equipment lead times, funding constraints, and other related issues, will lead DOE in establishing planning, programming, and budgeting for PED and project funds. OMBE input and DOE budget priorities may affect prioritization of a project's PED and funding profile. Early PED requests should be confirmed and updated as part of the CD-1 process. CD-1 determines and describes the concept/alternative that has been selected and provides management approval for the follow-on design phase. APB validation and CD-2 should receive DOE approval early enough to support the PDS submission to OMB. The overall interaction between funding types is shown in Figure 4-3.



**Figure 4-3. Budgeting Process and Funding Types**

#### 4.5.1 Project Engineering and Design Funding Requests

The annual “DOE Budget Formulation Handbook” will establish PED budget formulation and submission requirements. Requests for PED funds to initiate new design projects throughout all program elements within DOE began with the FY 2002 budget submission. To aid future PED requests, the following guidance is provided:

- PED budget requests will include projects that are scheduled to achieve CD-0 prior to the PED budget submission to OMB.
- PED budget requests will include funds necessary to complete project Preliminary and Final Designs (through CD-3).
- Budget requests subsequent to the FY 2002 request will include PED funds to initiate design of new projects and to continue or complete project designs previously funded by PED.
- The PED funding requested will depend on projected funding requirements, length of design period and budget guidance.
- The PED Project Data Sheet (PDS) prepared by the PAS will identify anticipated projects recommended for PED funding.
- PED funds for Preliminary and Final design will be released by the PAS upon CD-1 approval.
- After release of PED funds, any movement of funds between or among design projects requires prior PAS approval and notification of OMBE. All movement of funds should be reported in subsequent PED requests.

PED funding may be used for new projects not previously identified, if funds are available in the PED fund and if the PAS approves. Subsequent PED requests should be adjusted to reflect the transfer of funds and the initiation of a new project. The PAS should notify

Congress (via OMBE) before initiating preliminary design for a new project (see Section 2.4.3).

Beginning with FY 2002, PASSs are required to request PED funds to initiate any new design projects. PED funds will be used for projects that have an anticipated FY 2004 or later construction start. No procedural changes are required for projects funded for design and construction prior to FY 2002.

#### 4.6 Project Initiation

**Materiel acquisitions (projects), through various plans and documents, shall define organizational roles and responsibilities; utilize risk management, performance measurement, controls, and reviews throughout all phases.** During project Initiation and early planning, the bases/scope of a project is defined and developed. Typically, the outputs and deliverables include:

- Mission need documentation
- Identification and drafting of the acquisition strategy
- Identification of the Program Manager
- Identification, if possible, of the PM
- Identification and organization of the IPT
- Pre-acquisition design package
- Preparation of a package to request and obtain CD-0, Approve Mission Need.

These “preliminary” planning efforts develop and define/establish early project technical, schedule, and cost ranges, as a basis for follow-on project efforts; and demonstrate consistency with the DOE’s strategic goals, plans, and objectives. An important secondary purpose is to assure that all involved organizations are cognizant of and in agreement with the project as outlined and defined by these early project definition documents.

#### 4.7 Initiation Planning

During Initiation planning, a need or opportunity is identified that may be in response to a requirement developed or perceived by any entity: the DOE, contractor, oversight organization, or the public. This need is developed into a concept or mission, and a program sponsor is sought/appointed. This is typically a DOE–Headquarters Program function. Historical information and technical data that support the mission concept are developed into a MNS by the responsible Program. The MNS should be consistent with the Department’s Strategic Plan. If the project location has an overall Site Plan, then the draft acquisition strategy should be consistent with the Site Plan. The MNS includes sufficient detail to enable reviewers to assess the need for and impacts of the proposed acquisition. In all cases, the MNS should provide coverage of the following:

- A description of the proposed mission need, source and justification of need
- The draft acquisition strategy

- Alternative actions considered
- Identification of technical and organizational interfaces
- Preliminary risk assessment, including risk comparisons between other alternative actions, and constraints and assumptions. (See Chapter 9 and the Practice on Risk Management.)
- Resource implications.

Approve Mission Need (CD-0) provides approval for a proposed project to proceed with conceptual design.

#### 4.7.1 *Mission Need Statement*

The MNS is a high-level statement that broadly identifies and defines a new or modified materiel capability that is required by DOE to fulfill its mission. **MNS shall be concise, follow the format in Section 4.7.1, be risk-assessed, and evaluated by the IPT and reviewed by OMBE, including the draft AS prior to approval by the AE.** Development of a MNS is a three-step process: a need is identified, defined, and finally approved.

The identification phase is generally a continuing process, and normally begins with a review of the latest strategy and multi-year plans. The information is incorporated into an assessment of current and projected capability that is required by the various Programs to accomplish assigned missions. The process may also begin with the identification of opportunities to exploit technological breakthroughs that provide new capabilities that address established needs, reduce ownership costs, or improve the effectiveness of current equipment, facilities, or systems. The mission need analysis identifies the time-based nature of the need and the specific timeframe the need is expected to exist. Identified deficiencies or potential MNS should be evaluated and assessed across all DOE Program boundaries for solutions. Non-materiel solutions should also be considered, and if the need can be fulfilled by a non-materiel solution, the need should be referred to the appropriate DOE component for action.

Once a DOE Program has determined that a materiel solution is to be pursued, a draft MNS is prepared. The draft MNS should comply with the following format, and be as concise as possible, generally not more than 5 pages in length.

<p>Mission Need Statement For:</p> <p><i>Proposed Title</i></p> <p>Potential Project: <i>Major/Non-Major System Acquisition</i></p> <ol style="list-style-type: none"> <li>1. Responsible or Lead DOE Organizational Element</li> <li>2. Mission Area Analyses and Need</li> <li>3. Non-materiel Alternatives, Existing and Programmed</li> <li>4. Potential Materiel Alternatives</li> <li>5. Constraints and Assumptions</li> <li>6. Resource Implications</li> <li>7. Approval/Validations Signatures</li> </ol>
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## 8. Draft acquisition strategy

*Figure 4-4. Mission Need Statement Format*

The description is to be defined in terms of mission, objectives, and general capabilities—not in terms of equipment or system specific performance characteristics. That information will be provided during the Definition phase of the project. Input on needed timing and priority relative to other already established MNSs is also required.

Once the MNS draft is ready, the sponsor will coordinate the draft document with applicable DOE Program(s) and prepare the other documents required for a CD-0 decision.

### 4.7.2 Associated Mission Need Statement Submittals

In addition to the specific MNS, the following information, if available, may be provided as part of the MNS submittal package.

- Preliminary high-level functions and requirements. Identification and documentation of functions and requirements to provide an “overview description” of the materiel acquisition. This description could include potential sizes, siting, throughput, capabilities, important process features, products, etc.
- Preliminary NEPA Strategy. Identify probable environmental impacts of the proposed action and provide a plan and schedule for addressing those impacts. Identify probable environmental studies/surveys anticipated, as well as the environmental documentation that will need to be prepared.
- Planning schedule and milestones. Provide a high-level logic schedule for the acquisition life cycle. This document reflects logic, interfaces, approximate durations, expected KSPs, and expected KPPs, if possible.

### 4.8 Project Manager and the Integrated Project Team

As early as practicable, and prior to CD-1, a PM is to be assigned to the project. The PM should have the necessary training, skills, and experience for success. When assigned, the PM should assume total responsibility and accountability for the project. The PM should also be delegated (in writing) the necessary authority to successfully manage the project. This would normally be documented in the project charter (see Sections 2.4.4 and 2.4.7). When possible, selection of the IPT may be a combined effort involving the PM. When the PM has not yet been identified, the Program Manager may begin the selection process. However, the Program Manager may only identify those IPT members that are necessary to prepare and issue the initial project definition documents. The PM is allowed as much latitude as possible in selecting the IPT (see Sections 2.4.8 and 2.8.2).

Depending upon the project needs, the IPT could include legal, quality, safety, environmental, and technical personnel. In all cases, however, the IPT should include a representative from the contracting function; this may be a CO or the COTR. In certain cases, the PM may serve as the COTR. All IPT actions and activities are performed under the

direction of the PM. If possible, IPT members may be assigned for the length of time required to complete their IPT assignments.

The PM or acting PM should prepare and issue an IPT charter. The charter identifies team members, roles and responsibilities, authorities and line of authorities, IPT operating methods and procedures, communications, decisions, correspondence, and reporting. The charter may be included in the PEP.

#### **4.9 Acquisition Planning and Implementation Strategizing**

Acquisition planning and strategizing provides the means of obtaining a materiel asset that is consistent with the Department's strategic goals, plans, and objectives. The acquisition strategy begins with a draft acquisition strategy at CD-0, and is developed and approved at CD-1 as the AS. The strategy is to define, consistent with the available knowledge of the activity (mission need, conceptual design, etc.), how a project may be best and most cost-effectively obtained by the DOE. Traditionally, DOE has placed the burden of procuring new projects with their prime contractors. However, where appropriate, a more effective means of acquisition such as competitive, performance-based, or incentivized contracts may be used. The approach to be used should be defined in the AS. Acquisition planning and preparation begins when a DOE need is identified, well in advance of a planned contract award.

An acquisition strategy is a high-level business and technical management approach designed to achieve project objectives within specified resource constraints. AS is the framework for planning, organizing, staffing, controlling, and starting a project. It provides the initial approach for research, development, design, remediation, construction, test, production, and other activities essential for success, and for formulating functional strategies and plans. The AS establishes the managerial approach that will be used to direct and control all elements of the acquisition to achieve project objectives. The strategy is tailored to match the character of the project and allow the most efficient satisfaction of requirements, consistent with the degree of risk involved.

The Program Manager and the PM (if assigned) are responsible for developing and documenting the acquisition strategy, which conveys the project objectives, direction, and means of control, based on the integration of strategic, technical, and resource concerns. A primary goal in developing an acquisition strategy is to minimize the time and cost of satisfying an identified, validated need—consistent with common sense, sound business practices, and DOE basic policies and directives. The PM and other members of the IPT are key sources for information that can become a part of the AS.

The strategy is initially structured during pre-acquisition and conceptual elements of the project to provide an organized and consistent approach to meeting project objectives within known constraints. The AS for projects having a TPC greater than \$5M begins as part of the MNS submittal package at CD-0, and is included as a key element of the CD-1

submittal package. The AS may be modified as necessary throughout the project's life cycle and becomes a key element of the PEP.

A good acquisition strategy is tailored to project objectives and constraints, and is flexible enough to allow innovation and modification as the project evolves. The strategy balances cost and performance through development of technological options, exploration of design concepts, and planning and conduct of acquisition activities. These elements are directed toward either a planned IOC or retained for possible future use, while adhering to a project schedule and budget.

The strategy can be structured to achieve project stability by minimizing technical, schedule, and cost risks. Thus, the criteria of realism, stability, balance, flexibility, and managed risk are used to guide the development and execution of an AS and to evaluate its effectiveness. The strategy reflects the interrelationships and schedule of acquisition activities and events based on a logical sequence of demonstrated accomplishments, not on fiscal or calendar expediency.

The draft strategy matures and is fully developed at CD-1 as the AS. The AS focuses on planning and integrating the procurement/contracting processes required of the overall project to implement the AS. The AS is prepared, coordinated, and updated by the IPT in collaboration with the PM and CO.

The AS establish the project's path forward for selecting the principle participants and establishing their respective roles and responsibilities. Since these determinations are necessary early in a project's life cycle activity, the development, completion, and approval of the AS should be given the highest priority. The full elements of an AS are developed in Section 5.2.1.

#### *4.9.1 Acquisition Strategy*

**A draft AS shall be developed and submitted at CD-0 as part of the CD-0 package for approval.** As a minimum, this strategy establishes a plan for the next phase activities, and identifies and includes all project participants at this early project phase. A sample outline for this early draft acquisition strategy and the items to address follows:

- I. PROGRAM STRUCTURE. Define the relationship of the Initiation phase activities to the Critical Decisions and the Definition phase activities.
  - A. Identify major areas that are to be pursued during the Initiation phase.
  - B. Identify the respective roles of the DOE (Laboratories and other organizations) and industry, and the vehicles for industry's participation.
- II. ACQUISITION APPROACH. Discuss how the different technical efforts interact and relate to the decision process. Identify the products expected at the conclusion of each major effort (e.g., what level of design), and how they support major follow-on efforts.
  - A. Sources. Identify potential sources for contemplated industry effort(s).
  - B. Competition. Discuss how competition will be used and the degree to which contractors will be free to develop their own concepts. Address the time phasing of different contracting efforts, and the integration of the Initiation phase schedule

- with contemplated competitions. For each contemplated competition, identify the requirements that will be firmly established and those that will remain flexible.
- C. Control. Discuss how the Initiation phase will be controlled to avoid limiting competition.
  - D. Risk. Identify potential risk issues and initiate risk comparisons and assessments..
- III. CONTRACT TYPE. Identify the types of contracts contemplated for the Initiation phase activities, and correlate the selected type(s) with the risk (technical scope, schedule, cost) involved in the major contract efforts.

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